

OIB - DC-8 10/24/16 Science Report

Aircraft:

[DC-8](#) ([See full schedule](#))

Date:

Monday, October 24, 2016

Mission:

OIB

Mission Location:

Antarctica

Mission Summary:

This was a very successful flight of the Recovery Channel 1 mission with no loss of data due to clouds or other instrument issues. This low priority mission was chosen due to the poor weather present over higher priority target areas. The flight is a repeat of the identical 18 October 2012 flight and was last flown in 2014, its purpose is to obtain dh/dt measurements of Recovery Glacier. The mission is primarily designed along ICESat-1 ground tracks and also incorporates a crossing of the tributary channel entering the main Recovery channel from the west.

Take-off today was slightly delayed to account for airport construction as well as a short maintenance test by the air crew, but these did not affect our survey time. The ATM Applanix system appeared to function normally this flight, in contrast to a still unknown issue which affected previous flights. Redundant systems are on board such that no problems have been caused by this yet, but a spare Applanix unit will soon be uploaded to minimize the likelihood of any further problems.

Lastly, a piggyback microwave radiometer instrument called MiniRad was flown on this mission and looked to have successfully collected about 1 Gb of data, the team will analyze this data to test operation of the instrument.

Data volumes

ATM: T5: 16 Gb T6: 17 Gb

FLIR: 15 Gb

Cambot: 9 Gb

DMS: 37.5 Gb

Snow/Ku radars: 327 Gb each

MCoRDS: 907 Gb

AIRGrav: 5 Gb

data on: 1732

data off: 2030

Submitted by:

Nathan T. Kurtz on 10/25/16

File:

 [flight_map_recovery.pdf](#)

Related Flight Report:

DC-8 10/24/16 - 10/25/16

Flight Number:

1145

Payload Configuration:

OIB-ATM NAV/ATM GPS/ATM-T5/T6/ATM FLIR/ATM CAMBOT MCoRDS/SNOW/Ku RADAR DMS/POS-AV GRAVIMETER

Nav Data Collected:

Yes

Total Flight Time:

11.5 hours

Submitted by:

Chris Jennison on 10/27/16

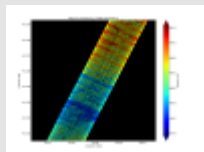
Flight Segments:

| | | | |
|---------------------|------------------------|----------------|------------------|
| From: | SCCI | To: | SCCI |
| Start: | 10/24/16 13:26 Z | Finish: | 10/25/16 00:56 Z |
| Flight Time: | 11.5 hours | | |
| Log Number: | 178010 | PI: | Nathan Kurtz |

| | |
|---------------------------|--|
| Funding Source: | Bruce Tagg - NASA - SMD - ESD Airborne Science Program |
| Purpose of Flight: | Science |
| Comments: | This was a first time survey flight for the DC-8 of the Recovery Channel 01 ice formation. We are told that it is so-named by the British Antarctic Survey because their sledges kept getting lost down crevasses forcing them to be recovered. This was a clear weather flight and typical of the amount of data each instrument records. The MiniRad from Colorado University flew for the first time and seemed to operate well. Data recorded: ATM T5 16GB, T6 17GB, CamBot 9GB, FLIR 15GB Ku radar 327GB, Snow radar 327GB, MCoRDS 907GB Gravimeter 5GB MiniRad 1GB |

Images:

ATM AT6 data sample



[Read more](#)

Flight Hour Summary:

| | |
|---------------------------------------|---------------|
| | 178010 |
| Flight Hours Approved in SOFRS | 300 |
| Total Used | 306.9 |
| Total Remaining | -6.9 |

178010 Flight Reports

| Date | Flt # | Purpose of Flight | Duration | Running Total | Hours Remaining |
|-------------------------------------|-------|-------------------|----------|---------------|-----------------|
| 10/04/16 | 1135 | Science | 4 | 4 | 296 |
| 10/05/16 | 1136 | Science | 2.7 | 6.7 | 293.3 |
| 10/12/16 | 1138 | Transit | 10.9 | 17.6 | 282.4 |
| 10/12/16 | 1139 | Transit | 3 | 20.6 | 279.4 |
| 10/14/16 - 10/15/16 | 1140 | Science | 10.9 | 31.5 | 268.5 |
| 10/15/16 - 10/16/16 | 1141 | Science | 11.8 | 43.3 | 256.7 |
| 10/17/16 - 10/18/16 | 1142 | Science | 11.8 | 55.1 | 244.9 |
| 10/20/16 - 10/21/16 | 1143 | Science | 11.4 | 66.5 | 233.5 |
| 10/22/16 | 1144 | Science | 11 | 77.5 | 222.5 |
| 10/24/16 - 10/25/16 | 1145 | Science | 11.5 | 89 | 211 |
| 10/25/16 - 10/26/16 | 1146 | Science | 11.3 | 100.3 | 199.7 |
| 10/26/16 - 10/27/16 | 1147 | Science | 12.1 | 112.4 | 187.6 |
| 10/27/16 - 10/28/16 | 1148 | Science | 11.5 | 123.9 | 176.1 |
| 10/28/16 - 10/29/16 | 1149 | Science | 11 | 134.9 | 165.1 |
| 10/31/16 - 11/01/16 | 1150 | Science | 11 | 145.9 | 154.1 |
| 11/02/16 - 11/03/16 | 1151 | Science | 11.2 | 157.1 | 142.9 |

| | | | | | |
|-------------------------------------|------|---------|------|-------|-------|
| 11/03/16 - 11/04/16 | 1152 | Science | 11.5 | 168.6 | 131.4 |
| 11/04/16 - 11/05/16 | 1153 | Science | 11.1 | 179.7 | 120.3 |
| 11/05/16 - 11/06/16 | 1154 | Science | 11.7 | 191.4 | 108.6 |
| 11/07/16 - 11/08/16 | 1155 | Science | 11.2 | 202.6 | 97.4 |
| 11/09/16 - 11/10/16 | 1156 | Science | 11.7 | 214.3 | 85.7 |
| 11/10/16 | 1157 | Science | 10.9 | 225.2 | 74.8 |
| 11/11/16 - 11/12/16 | 1158 | Science | 11.3 | 236.5 | 63.5 |
| 11/12/16 - 11/13/16 | 1159 | Science | 11.1 | 247.6 | 52.4 |
| 11/14/16 | 1160 | Science | 10.9 | 258.5 | 41.5 |
| 11/15/16 - 11/16/16 | 1161 | Science | 11.6 | 270.1 | 29.9 |
| 11/17/16 - 11/18/16 | 1162 | Science | 11.1 | 281.2 | 18.8 |
| 11/18/16 - 11/19/16 | 1163 | Science | 11.1 | 292.3 | 7.7 |
| 11/21/16 | 1165 | Transit | 11.6 | 303.9 | -3.9 |
| 11/21/16 | 1164 | Transit | 3 | 306.9 | -6.9 |

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

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Page Last Updated: April 22,
2017

Page Editor: Erin Justice

NASA Official: Bruce A.

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